

## EXECUTIVE SUMMARY

**Current Species Status:** The distinct population segment (DPS) of Southern Resident killer whales (*Orcinus orca*) was listed as endangered under the Endangered Species Act (ESA) on November 18, 2005 (70 FR 69903). Prior to the ESA listing the National Marine Fisheries Service (NMFS) determined that the Southern Resident stock was below its optimum sustainable population (OSP) and designated it as depleted under the Marine Mammal Protection Act (MMPA) in May 2003 (68 FR 31980). Southern Resident killer whales occur primarily in Washington State and British Columbia in the summer and fall and in coastal waters in the winter. Southern Residents use echolocation during foraging and feed primarily on salmonids. The whales exhibit advanced vocal communication and live in highly stable social groupings, or pods, led by matriarchal females. The Southern Resident distinct population segment (DPS) experienced an almost 20 percent decline from 1996 to 2001 and was petitioned for listing under the ESA in 2001, and was listed as endangered in 2005. Since 2001 the population has increased, with 87 whales in the Southern Resident DPS in 2007. The major threats identified in the listing were prey availability, pollution and contaminants, and effects from vessels and sound. In addition demographics, small population size, vulnerability to oil spills and other factors were considered.

**The Recovery Plan:** The ESA requires the Secretary of Commerce to develop and implement recovery plans for the conservation and survival of endangered and threatened species. NMFS developed a proposed conservation plan under the MMPA which served as the foundation for the recovery plan. NMFS held a series of workshops in 2003-2004 to receive input from a variety of stakeholders on ideas for management actions to include in a conservation plan. A preliminary draft document was posted for public review in March 2005. Comments on the draft plan were incorporated into a proposed conservation plan which was released for further public comment in October 2005. NMFS incorporated comments, added ESA elements, and released a proposed recovery plan for public review in November 2006. We received comments and prepared a summary of the comments and provided information on our responses, including descriptions of the edits made to this Final Recovery Plan to incorporate suggestions. We also included new information, research results and references that have become available since the proposed recovery plan was released. The Final Recovery Plan reviews and assesses the potential factors affecting the Southern Residents and lays out a recovery program to address each of the threats.

**Recovery Strategy:** There is considerable uncertainty regarding which threats may be responsible for the decline in the population or which is the most important to address for recovery. The plan lays out an adaptive management approach and a recovery strategy that addresses each of the potential threats based on the best available science. The recovery program outline links the management actions to an active research program to fill data gaps and a monitoring program to assess effectiveness. Feedback from research and monitoring will provide the information necessary to refine ongoing actions and develop and prioritize new actions. The recovery program in the plan includes actions to address the following topics:

**Prey Availability:** Support salmon restoration efforts in the region including habitat, harvest and hatchery management considerations and continued use of existing NMFS

authorities under the ESA and Magnuson-Stevens Fishery Conservation and Management Act to ensure an adequate prey base.

**Pollution/Contamination:** Clean up existing contaminated sites, minimize continuing inputs of contaminants harmful to killer whales, and monitor emerging contaminants.

**Vessel Effects:** Continue with evaluation and improvement of guidelines for vessel activity near Southern Resident killer whales and evaluate the need for regulations or protected areas.

**Oil Spills:** Prevent oil spills and improve response preparation to minimize effects on Southern Residents and their habitat in the event of a spill.

**Acoustic Effects:** Continue agency coordination and use of existing ESA and MMPA mechanisms to minimize potential impacts from anthropogenic sound.

**Education and Outreach:** Enhance public awareness, educate the public on actions they can participate in to conserve killer whales and improve reporting of Southern Resident killer whale sightings and strandings.

**Response to Sick, Stranded, Injured Killer Whales:** Improve responses to live and dead killer whales to implement rescues, conduct health assessments, and determine causes of death to learn more about threats and guide overall conservation efforts.

**Transboundary and Interagency Coordination:** Coordinate monitoring, research, enforcement, and complementary recovery planning with Canadian agencies, and Federal and State partners.

**Research and Monitoring:** Conduct research to facilitate and enhance conservation efforts. Continue the annual census to monitor trends in the population, identify individual animals, and track demographic parameters.

**Recovery Goals, Objectives, and Criteria:** The goal of the plan is to restore the endangered Southern Residents to the point where they no longer require the protections of the ESA.

*Delisting:* When the Southern Resident killer whales have sustained an average growth of 2.3 percent per year for 28 years, population parameters are consistent with a healthy growing population, and threats have been addressed, they will no longer be in danger of extinction or likely to become endangered in the foreseeable future (for more specifics, see section IV, Goals, Objectives and Criteria).

*Downlisting:* Interim downlisting criteria of average growth of 2.3 percent per year for 14 years and progress toward addressing threats represent sustained growth to indicate that the population could be downlisted to threatened, i.e., likely to become endangered in the foreseeable future. (for more specifics, see section IV, Goals, Objectives and Criteria).

Monitoring population trends over time will be necessary to confirm that the population has recovered.

**Estimated Cost of Recovery:** Many efforts are currently underway in Puget Sound to address recovery of depleted salmon stocks, improve the condition of Puget Sound, and assist in prevention and response to oil spills. In addition to these ongoing efforts, the Recovery Program identifies the cost and time to carry out actions to address the threats specific to Southern Resident killer whales although we cannot estimate when the most important threats will be identified or when recovery criteria will be met. The Southern Resident DPS could meet the biological criteria under a variety of scenarios and time frames. Funding for research and conservation efforts has been available for fiscal years 2003- 2007 and continued recovery and research efforts over the next five years are estimated to cost \$15,040,000. If the first five years of actions occurred, the annual cost would likely be reduced for subsequent years (~\$1,500,000/year). Assuming a time frame of 28 years for delisting, the total estimated cost of recovery would be \$49,540,000.

Recovery of the Southern Resident killer whale DPS is a long-term effort that requires cooperation and coordination of West Coast communities from California to British Columbia. The plan was developed with input from a variety of stakeholders, including Federal and State agencies, Tribes, non-profit groups, industries, the academic community, and concerned citizens. Development of this plan was closely coordinated with the State of Washington and the Canadian Department of Fisheries and Oceans.